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THE DECREASE OF BIRDS IN
SOUTH CAROLINA

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BULLETIN *of the*
University of South Carolina

Decrease of Birds
In South Carolina



ISSUED MONTHLY
BY THE UNIVERSITY

No. 47

August, 1916

COLUMBIA, S. C.
Second-Class Mail Matter



The History of the
County of Lincoln

By John G. Nichols

Vol. I. The Early History

1892

Published by the

Lincoln County Historical Society

Lincoln, Nebraska

1892

Printed by

W. H. Jones

Lincoln, Nebraska

1892

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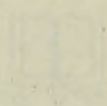


BY

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The Decrease of Birds in South Carolina



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THE DECREASE OF BIRDS IN SOUTH CAROLINA

The people of South Carolina are now called upon by the inexorable logic of conditions to face and answer a very serious question. That question is: Shall we take the action necessary to save our remnant of wild birds and game on a reasonable and permanent basis, or shall we remain passive and permit all of it to be destroyed forever?

It is an undisputed fact that the prosperity of the State and nation depends on successful agriculture. Therefore, whatever assists in the production of crops has a money value in proportion to the degree of assistance rendered. The result of the study of the relation of birds to agriculture made by government experts shows that birds are among the farmers' best friends. Mr. Henry W. Henshaw, Chief of the Bureau of Biological Survey, is authority for this statement: "So great is their value from a practical standpoint as to lead to the belief that were it not for birds successful agriculture would be impossible."

Birds are busy everywhere and at all times; in the water and on the land; in low bushes and on the tree-tops; on the trunks and branches of trees and in the air. Some work by day, others by night. Some are scavengers; others check the ravages of disease-carrying insects. Some feed on insect pests which attack crops; others are noxious weed seed destroyers. Some protect fruit and forest trees; others are very destructive to harmful rodents such as mice and rats.

If the birds' work in nature be of so much importance, bird conservation should become a part of the constructive work of the State, and any agency or condition which tends to reduce the bird population below the limits necessary to hold in check the countless hordes of injurious insects, should be considered inimical to the best interests of the whole people.

The questions used by Mr. Forbush have been slightly changed to suit conditions in this State. In the form and treatment of the subject matter, the reports of Dr. Hornaday and Mr. Forbush have been very closely followed.

Evidence of Former Abundance

As an aid to the understanding and appreciation of the results of the investigation into the conditions affecting bird life in this State at the present time, a few extracts will be given from explorers, historians and colonists concerning the former abundance of game in South Carolina:

Hilton, in his "Relation of a Discovery" (1664) says: "The Country abounds with Grapes, large Figs and Peaches; the Woods with Deer, Conies, Turkeys, Quails, Curlues, Plovors, Teile, Herons; and as the Indians say, in Winter with Swans, Geese, Cranes, Duck and Mallard, and innumerable of other water Fowls, whose names we know not which lie in the Rivers, Marshes, and on the Sands."¹ Robert Horne, in his "Description of the Province of Carolina" (1666) writes: "The Woods are stored with Deer and Wild Turkey." He also says: ". . . in the little Winter they have an abundance of wild Geese, Ducks, Teals, and Widgeon—and many other pleasant Fowl."²

In "An Account of the Province of Carolina" (1682) we find: "On the Rivers and Brooks are all the Winter Months vast quantities of Swan, wild Geese, Duck, Widgeon, Teal, Curlew, Snipe, Shel Drake, and a certain sort of Black Duck that is an excellent meat and stays there the year round."³ In John Archdale's "Description" (1707) he relates: "There is also vast Quantities or Numbers of Wild Ducks, Geese, Teal."⁴

Lawson, in his account of his travels in Carolina (1718)

1 Hilton (William): A Relation of a Discovery lately made on the Coast of Florida. (From Lat. 31 to 33 deg. 45 min. North-Lat.), London, 1664.

2 Horne (Robert): A Brief Description of the Province of Carolina, London, 1666.

3 Reprinted in Carroll's Historical Collections.

4 Salley's *Narratives of Early Carolina*, Scribners, 1911. p. 289.

says: "—in the Season good plenty of fowl, as Curleus, Gulls, Gannets, and Pellicans, besides Duck and Mallard, Geese, Swans, Teal, Widgeon, etc." In another place he speaks of "great Flocks of Turkeys" in the adjacent woods. Of the vast number of passenger pigeons, he says: "You might see many millions in a Flock. They sometimes split off the limbs of stout Oaks and other Trees upon which they roost o'Nights."⁵

Catesby in his *Natural History* (1731) writes: "In the winter season there are great variety of different species of Sea Fowl in numerous flocks feeding promiscuously in open bays and sounds."⁶ Eliza Lucas, writing to her brother in England in 1741, speaks of the abundance of wild fowl.⁷ A most interesting description of the birds of the province is found in Hewat's account (1779): "There are also vast numbers of winged fowls found in the country. Besides eagles, falcons, cormorants, gulls, buzzards, hawks, herons, cranes, marsh hens, jays, woodpeckers, there are wild turkeys, pigeons, black birds, wood cocks, little partridges, plovers, curlews and turtle doves in great numbers; also incredible flocks of wild geese, ducks, teal, snipes, mockbird, redbird and hummingbird."⁸

Then another leaf is turned, and in the place of praise for the "great store of fowl" we find expressions of regret for the decrease which begins to be apparent. In a "Statistical Account of Edisto Island" (1809) is found the following statement: "Their range, the crowded settlements, and cleared state of the island render it unfavorable to the pursuit of the hunter." The writer continues: "Similar causes may have operated to drive and scare away those migratory and aquatic birds which at the

⁵Lawson's *History of Carolina*, London, 1718, p. 8.

⁶Catesby's *Natural History of Carolina, Florida and Bahamas*, London, 1731, Vol. 1.

⁷Ravenel, Harriott Horry: *Eliza Pinckney*, Scribner's, 1886.

⁸Reprinted in Carroll's *Historical Collections*, p. 80.

General Decrease.

One hundred and nine reports show that birds are decreasing generally, following the decrease all over the country. Sixteen reports show decrease of certain species only, mostly game birds; sixteen, birds as holding their own and ten, birds as increasing, three report not knowing.

Most of the reports on the decrease of game birds come from hunters, who, because of their knowledge of these species are more competent to report on them. In addition to the game birds reported as decreasing, viz: Bob-white, Carolina Dove, Woodcock, Killdeer, Wood Duck, Wilson's Snipe and Wild Turkey, almost every report contained a list of species estimated to be either decreasing or increasing. A very careful study of these exceptions shows the decrease of a great many other species, the stationary condition of a few and a slight increase in a few others. The conclusion is reached that the reports stand for a much greater general decrease than is brought out in the table.

Expert Evidence of Decrease

The two expert ornithologists who have furnished data for this report are, Mr. Arthur Trezevant Wayne, Mount Pleasant, S. C., and Dr. Eugene Edmund Murphey, Augusta, Ga. Mr. Wayne has been almost continuously in the field for more than thirty years, and has worked the coast counties south of Georgetown county. His valuable book, "Birds of South Carolina," published by the Charleston Museum in 1910, is quoted from freely in this bulletin.

For twenty-five years Dr. Murphey has studied the counties of Aiken, Barnwell and Edgefield. What these authorities say may be considered authoritative, and an evidence of the correctness and value of the reports from observers of less experience in these localities is shown by the closeness with which their reports agree with the data furnished by Mr. Wayne and Dr. Murphey.

Mr. Wayne reports: "Doves, Woodcock, Wild Turkeys

Records of Decrease

The species reported as decreasing very rapidly or approaching extermination in different sections of the State, are given below with the numbers reporting each: Blue-bird, 73; Bob-white, 39; Nighthawk, 32; Herons, 30; Purple Martins, 25; Eagles, 25; Chimney Swift, 22; Hawks and Owls, 21; Mourning Dove, 18; Thrushes, 17; Wrens, 16; Cardinals, 16; Mockingbirds, 15; Woodpeckers, 15; and all game birds, 15; Ground Dove, 14; Pileated Woodpecker, 13; Meadowlarks, 12; Wood Duck and Woodcock, 11; Robins, 10; Warblers, 9; Redheaded Woodpecker, 9; old field Sparrows, 7; Blackbird family, 6; Flickers, 6; Wilson's Snipe, 5; Ducks, 4; Kingbirds, 4; Wild Turkeys, 4; Snowbirds, 3; Blue Jay, 3; Cedar Waxwings, 3; Catbirds, 3; Chuck-will's-widow, 2; Curlew, 2; Shore-birds, 2; Sandpipers, 2; Coot, 1; Spanish Curlew, 1; Osprey, 1; Loggerhead Shrike, 1; Killdeer, 1; Songbirds, 1; Red-bellied Woodpecker, 1; Wood Pigeon, 1; Wilson's Plover, 1; Wild Geese, 1; Brown-headed Nuthatch, 1; Red-cockaded Woodpecker, 1.

As the Bob-white is the bird most sought for food and sport, the game bird par excellence, and as it is one of the most useful birds to the farmer, by reason of its appetite for large quantities of harmful insects and seeds of noxious weeds, it is interesting to know that 39 observers report its alarming decrease. "There are not half as many Bob-white or Quail as in former years. If they could be protected from the pothunter, market hunter and hunting out of season, in three or four years there would be as many as there were fifteen years ago" writes J. P. Dill.

Mr. Frank Hampton, president of the Audubon Society, reports: "I do not believe, taking all birds, there is one bird now where there were ten and in some cases one-hundred, thirty or forty years ago. Last fall I hunted over territory where I used to count twelve coveys, and found only one small covey. I can remember when there were countless numbers of Blackbirds in the pine woods and fields. I now see none. I used to see hundreds of Nighthawks and have known three or four men to kill from

twenty to thirty each in an afternoon. Last summer I counted only thirteen. Where I have seen Robins by the hundreds or even thousands, I hardly see them by the dozens now. Cedar Waxwings, Snowbirds, Chipping Sparrows, Flickers, Woodpeckers, Swallows, Martins, Chuck-will's-widows, and others greatly decreased. As for ducks, we have none except the Wood Duck. These with Woodcock and Wilson's Snipe are nearing extermination."

Length of Time of Decrease

As regards the length of time the decrease has been continuing, reports from 95 observers have been tabulated thus:

38	Report Decrease Continuing for 20 Years.					
24	"	"	"	"	40	"
18	"	"	"	"	30	"
12	"	"	"	"	15	"
4	"	"	"	"	25	"

It is probable that the decrease has been going on thruout the period of observation of those making the reports, and from these figures it is impossible to make any deductions as to the average length of time the decrease has been continuing in the State as a whole.

Species Extinct or Nearing Extinction

Scientists believe that each and every species of birds has its own particular work to do in nature which cannot be so well done by any other species. A species once extinct is never again reproduced in nature. Therefore the destruction of a species is a very serious matter.

Ornithologists generally report the following species as having become extinct since the settlement of the State: Carolina Paroquet, Ivory-billed Woodpecker, Eskimo Curlew, and Passenger Pigeon. The range of the Carolina Paroquet extended as far north as the Great Lakes and as far west as Colorado. They were exceedingly abundant but now all are gone. The large, handsome Ivory-billed Woodpecker has been exterminated in this State. The Pileated, which is often mistaken for it, is also fast dis

appearing. The Eskimo Curlew, a useful, valuable and highly esteemed game bird, has been practically exterminated.

The most striking example of the absolute extermination of a species is that of the Passenger Pigeon. It was the most abundant of all species, and writers from the very beginning of the settlement of the country speak of its countless numbers. It was subjected to merciless persecutions and slaughterings all along its route of migration. The last great flight occurred in 1880, after which they rapidly disappeared until the last bird died in the Cincinnati Zoological Garden, September 1, 1914.

Of the long-billed Curlew, a non-game bird whose large size made it an easy target for gunners, Mr. Wayne says: "It is now almost extinct on the South Carolina coast where it once swarmed in countless multitudes." He also reports not having seen one since 1889.

The Upland Plover or Bartramian Sandpiper, one of the most valuable birds to the farmer, is rapidly approaching extermination, and the Ruffed Grouse, which used to breed abundantly in the mountainous counties, has been extirpated from this State. The Whooping Crane long since disappeared from the Atlantic coast, and in the interior of the country where it is occasionally found, it is doomed to early extinction.

Holding Their Own

A careful study of the reports that birds are holding their own or slightly increasing in certain localities, leads to the conclusion that this holdup or increase is due to exceptional and local causes which have been operating for only a short time. It does not mean that birds are as numerous as formerly, or that they have increased to a point above their former abundance. It simply means, in the opinion of the observers making the reports, that after a long and steady decrease, in most cases, there has been a slight holdup in the decrease, and that the numbers are now stationary, or that the birds have begun to increase above their former limited numbers to which

they had been reduced by destructive agencies which have been in operation since the settlement of the country.

While in the immediate vicinity of the observer there may be slight change for the better, in the State at large, the forces of destruction are still at work. A reference to the table shows that, in contrast to the sixteen reports from fourteen counties of birds holding their own, there are thirty-seven reports of decrease of birds generally.

The following testimony is both instructive and interesting as it shows a few of the reasons why, in the opinion of these observers, birds are not decreasing, or are holding their own in some parts of the State.

Mr. C. W. Whisonant, Cherokee, writes: "As to what has operated to save the birds, I think the law against hunting at certain seasons has done as much as any other agency and there are not as many dogs as there used to be. People generally seem to be trying to take care of the birds, especially the landowners."

Mr. W. B. Ryan, Jasper, asserts: "Birds are holding their own in this county because they are protected by the various hunting clubs who own in the aggregate, 150 and 200 thousand acres of land. They are all posted and guarded, and in the case of the Okatie Club, have special nesting protection." Mr. Karl Dargan, Darlington, writes: "Our section is thinly settled and we have quite a lot of woods and swamps that the birds raise in, and we have tried to protect all kinds of birds on our place for some years." Dr. Wade Stackhouse, Dillon, reports: "Thoughtless boys with guns kill far fewer birds than they did a few years ago. Extensively cleared fields have done much to diminish bird life. Constant agitation of the subject will have its effect."

Mr. M. H. Fripp, Jasper, writes: "Insect-eating and song birds are the same for the last fifteen years. Salt-water birds, Plovers and Herons, decreasing. Chelsea Plantation Club protects all kinds of birds, especially game birds. On the estates of William and John Fripp there are all kinds of birds. We seldom allow any one to shoot." Mr. C. W. Boykin, Williamsburg, reports: "I

have a large area of land upon which I am protecting the birds for a small gun club. We have all the birds we could expect. In the meantime we kill very few during the season."

Summary of Reports Showing Increase

It is of value to study in detail those reports which show a local increase, in order that we may, if possible, find out the causes and apply them to the sections in which bird life has been reduced. Ten reports from eight counties show increase: Three from Charleston, and one from each of the following counties: Colleton, Dorchester, Jasper, Kershaw, Orangeburg and Union.

Capt. Robt. Magwood, Charleston, writes: "Birds have been on the increase in this county for the past two years. Before this, decrease had been gradual for the last forty years, but more so last ten years. There are one-half as many as fifteen years ago. White Herons, Pelicans, Shearwaters and Gulls have increased from protection largely during breeding season. Spanish Curlew all gone. Laws fairly well observed."

Mr. L. A. Beckman from the same county says: "Birds of all kinds decreased rapidly up to four years ago, when private landowners began to enforce the laws on their own lands, and the people have been educated to value birds. Now they have begun to increase. One-half as many as fifteen years ago, when D. M. Mackintosh began to buy and ship feathers. American Egret, Wood Duck and Quail have increased on property of Santee Gun Club, caused by protection. Some species of shore-birds have become extinct. Private landowners have prohibited to a large extent shooting on their property. The work of the Audubon Society, thru Mr. James Henry Rice, did much to educate the people, especially the children as to the value of birds and now you rarely see a sling-shot in the hands of boys. Laws are enforced by private landowners but not by game wardens."

Mr. T. J. Simons, Charleston, reports: "There is a decided improvement. Increase in sea-birds is due to the

discouragement by parents and others of young people taking eggs for collection and exchange. A better sentiment for protection has been created. Quail and Duck have increased from protection and short season. In some sections there has been vast improvement with the Quail. In others they have decreased. Where increase has been noticeable, they have been protected by land-owners, who have offered and paid premiums for fox heads and hawk claws. Frequently, the house cat which has become wild has been included in this premium, as they are looked upon as most destructive to young quail. The game laws are neither respected nor enforced."

Mr. T. D. Ravenel, Colleton, writes: "Some species have increased. I think the numbers will compare favorably with fifteen years ago. This is bird paradise. The chief reason, I think, is the tremendous amount of feed all the year round, the large amount of uncleared land with heavy vegetation and few inhabitants—the natural enemies of birds. The game laws seem to have no effect, as they are disregarded by everyone. Blackbirds and Jaybirds have increased."

From Darlington, Mr. J. L. Coker, Jr., reports: "General sentiment favorable to birds. Just as many as fifteen years ago, with nearly all species on the increase, except a few which are molested by Jays; viz: "Orchard Oriole, Wood Pewee, Summer Tanager, Vireo and Titmouse. No other destructive agency apparent except cats and English Sparrows. Game laws are respected and enforced increasingly."

Mr. L. A. Walker, Dorchester, writes: "Birds appear to be increasing in this immediate locality. About as many as fifteen years ago, except Bluebirds, Catbirds and Quail. Mockingbirds, Nighthawks and Jays are increasing. In this immediate vicinity, there seems to be a different view of bird life taken in town and country, due to the influence of Mr. James Henry Rice who resided here a number of years, and to the winter visitors who take an interest in bird protection. Farmers are beginning to realize that birds are of value to them, and the small boy does not rob

so many nests, or kill so many with sling shots. The work done in the schools and the talks to the farmers have had their effect. Laws are only in part respected and are not enforced."

Mr. L. B. Altman, Jasper, reports: "In my locality there is a slight increase thruout. I live on a large plantation, plant much grain, allow no shooting, and have noticed from year to year, an increased number of birds. Bluebirds have probably decreased. Partridges and Larks have increased. Game laws are known, fairly well respected and enforced."

Mr. D. R. Williams, Kershaw: "Birds considerably increased as a whole. Doves and other game birds have probably decreased. All kinds have increased except game birds, because of a growing appreciation of birds, and an increasing spirit of protection, even by boys. Laws known, respected and enforced."

Mr. M. O. Dantzler, Orangeburg, reports: "Probably slightly on the increase for the past four or five years, except a few species. There are three-fourths as many as fifteen years ago. Mockingbirds are increasing. Yellow Hammers, Thrushes, Cardinals, and Bee Martins nearing extinction. Laws are half way known, respected by the best class of hunters, and not enforced heretofore."

Mr. W. R. Walker, Union, writes: "Birds are not decreasing in my locality. I think there are more than fifteen years ago. On my farm and in my immediate section there has been little hunting done in the past five years. I allow no hunting on my farm whatever, except to kill Hawks and Owls. I have plenty of grain planted each year, and the birds get plenty of food, and besides I have them looked after the best I can. Game laws are enforced."

Assigned Causes for Birds Holding Their Own or Increasing

The reasons assigned in the reports showing birds holding their own or increasing have been classified thus, with the number reporting each: More interest on the part of the public due almost entirely to the educational

efforts of the Audubon Society, 10; protection by land-owners and hunting clubs, 9; little or no shooting or hunting, 5; plenty of cover and breeding places, 5; protection by law, 4; plenty of food, 3; thinly settled with plenty of woods and swamps, 2; protection during nesting season, 2; posting land, 1; feeding birds when snow is on the ground, 1; short open season, 1; closed season, 1; not so many dogs, 1.

From this it appears that birds are increasing or holding their own in a few localities, not so much from the enforcement of the law by the constituted authorities, as from purely local causes arising from a growing appreciation on a part of the public of the value of birds. Where there is little hunting and plenty of food, safety, cover and nesting sites, birds will increase.

In all of the ten reports of increase cited above, except one, evidence is given of the decrease of certain species. They show no general increase of birds over a large district or thruout a long period of time. Nor is any estimate given of the degree of increase. In order that a clear idea may be had of these reports, a concise summary of each is given below.

Charleston: 1. Certain species increasing; Long-billed Curlew gone. 2. Certain species increasing; some species of shore-birds have become extinct. 3. In certain sections Quail increasing, in others, Quail decreasing. Colleton: Some species have increased; Bluebirds scarce. Darlington: Most species increasing; a few decreasing. Dorchester: All species increasing except Bluebird, Catbird and Quail. Jasper: slight increase throughout; Bluebirds scarce. Kershaw: All increased except game birds. Orangeburg: Some species increasing. Yellow Hammer, Thrush, Cardinal and Bee Martin nearing extermination. Union: Birds increasing; more than fifteen years ago.

From the counties with ten reports of increase, there are sixteen reports of general decrease. If the evidence of decrease given in the above reports on increase be added to the evidence found in the sixteen reports on decrease, the conclusion is reached, that the increase is far less than is brought out in the table.

Increase of Species

One hundred and thirty-four replies were received to the request for information as to the increase in numbers of any species of birds and the causes. Twenty-six reported none as increasing. The following list was given by the remaining 108 observers, with the number reporting each:

English Sparrows, 64; Blue Jays, 10; Meadowlarks, 9; Quail and Doves, 7; Crows, 5; Mockingbirds, 5; Catbirds, 3; Blackbirds, 2; all where protected, except game birds, 2; all birds protected at all times, 1; Flickers, 1; Orioles, 1; Wood Ducks, 1; Bluebirds, 1; Brown Thrasher, 1; Red-headed Wookpecker, 1; Nighthawk, 1; Wood Thrush, 1; Summer Tanager, 1; Grackles, 1; White Herons, 1; Indigo Buntings, 1; Chipping Sparrows, 1.

It is alarming that the only bird which the reports show to be increasing to any extent is the English Sparrow, the most undesirable of all species. The decrease of our native song birds is due largely to the advent, rapid increase and aggressive qualities of this pest.

A careful comparison of the number of observers reporting increase in other species mentioned with the number reporting these species as decreasing leads to the conclusion that the Blue Jay is the only specie which is holding its own or increasing over a wide area.

Destruction by the Elements

While no direct question was asked concerning the injury to bird life from the extremes of weather, twenty-two observers report decrease from heavy sleet and snow storms, three cite extremely wet and dry breeding seasons and one extremely cold breeding season as preventing the increase of birds. Many young birds starve during long-continued rains which prevent the parent birds from finding food for their nestlings.

In order to maintain their great activity, rapid circulation and high temperature, birds require a large amount of food. When, therefore, everything is encased in ice or

covered with snow for many hours, and the birds cannot find food, they suffer severely, and sometimes great mortality results, either from actual starvation or from their inability, because of their weakened condition, to escape their enemies.

Mr. B. D. Dargan, Florence, writes: "During every snow there are hundreds of small birds such as Sparrows, Cardinals, Thrushes, etc., caught by negroes under dead-falls." Mr. Keith Dargan, Darlington, reports that on his plantation during a sleet or snow storm, the negroes are taught not to kill the birds, but to feed them. Mr. West Harris, Spartanburg, says: "The hard rains and wind storms that generally come about the time the young birds are wanting to try their wings, do great damage to all our birds from the Wild Turkey to Hummingbird."

Concerning Bobwhites, Mr. Orville Calhoun, Abbeville, writes: "When an extremely wet season comes, they suddenly decrease in numbers, and the next year they do not recover their original numbers, tho the season is good." Doubtless, this is due to the fact that the causes of decrease of bird life have operated to decrease the breeding stock in the interval between the bad and good breeding seasons. If after a decrease of this kind the remaining birds are closely shot by gunners, as is usually the case, it will be impossible for them to recover their former abundance.

Dr. Hornady cites instances of Quail shooters who deplore the killing of Quail by the severities of the weather, but who will not stop Quail shooting on account of it.¹ Mr. Wayne records a notable destruction of Woodcock near the coast: "The Woodcock arrived in countless thousands. . . . They were everywhere and completely bewildered. Tens of thousands were killed by would-be sportsmen, and thousands were frozen to death. The great majority were so much emaciated that they were practically fearless and of course were unable to withstand the cold. One man killed two hundred pairs in a few hours. . . . It will

¹Hornady, W. T., *Our Vanishing Wild Life*, p.89.

be many years before this fine bird can establish itself even under the most favorable conditions."²

The species mentioned as most affected by unfavorable weather conditions are: Bluebirds, Purple Martins, Chimney Swifts, Cardinals, Kingbirds, Ground Doves, Bobwhites and other species more or less. No advantage should ever be taken of any form of useful wild life which is suffering from the severities of weather or other natural causes. In many parts of the country it has become the custom to feed the birds as long as snow is on ground. A close season should be put on any species of game bird which has been greatly reduced from any cause.

Native Natural Enemies

The following is a list of the native natural enemies given as causing a decrease in bird life with the numbers reporting each:

<i>Natural Enemies</i>	<i>Number Reporting</i>
Hawks	48
Snakes	24
Foxes	20
Owls	18
Jays.....	16
Crows	5
Wild Cats.....	1
Minks	1
Skunks	1
Opossums	1

In a state of nature undisturbed by man the native natural enemies of birds do not cause any great reduction in their numbers. When the first settlers came to this country the native natural enemies were very abundant and so were the birds. In a state of nature undisturbed by man, the native natural enemies are the friends of birds. By killing off the weak and unfit they keep birds strong, alert and active.

²Wayne, A. T., *Birds of South Carolina*, p. 45.

The larger natural enemies destroy the smaller ones: Crows and Jays destroy smaller birds; Hawks and Owls destroy Crows and Jays, thus preserving what is known as the balance of nature, or the adjustment of nature's laws. But thru man's interference, this balance or adjustment is often upset, and the native natural enemies of birds may become so numerous as to be positively harmful. When this happens these native natural enemies should be reduced in numbers but not wholly destroyed, for it is not known what disastrous results might follow the destruction of a single species.

Forty-eight observers report Hawks and eighteen report Owls as very injurious. It is most unfortunate that two families of birds having so many good members as the Hawk and Owl families should be so hated and persecuted because of the evil ways of a few exceptions. Detailed examinations of the food habits of these birds show that only three Hawks, viz: Cooper's, Sharp-shinned, and Duck Hawks, and one Owl, the Great Horned, do more harm than good. The Duck Hawk is so rare in this State, it need scarcely be taken into consideration.¹ Cooper's and Sharp-shinned Hawks destroy many birds and most of the poultry for which all hawks are persecuted. The Great Horned Owl is found only in deep woods.

Nearly all the common snakes are said to eat birds and eggs, but the most destructive is the pilot black snake. Crows and Jays are destructive to bird life by robbing the nests and destroying the eggs and young of other birds. The Crow and Jay have some useful habits which atone for this destruction, tho neither should be allowed to become so numerous as to be seriously destructive.

The native four-footed enemies of birds do some harm: Foxes, wild cats, minks, skunks and opossums. But they do some good in other ways. The natural enemies introduced into this country which have become very injurious to native birds are: English Sparrow, dog, horse, cat and hog. As the destruction caused by them is due indirectly to

¹Wayne, A. T., *Birds of South Carolina*, p. 77.

man, the reports concerning them will be tabulated and discussed in the section devoted to the causes of decrease which are traceable to man.

Causes of Decrease

As effectual as the above mentioned causes may be in reducing bird life under certain conditions, they cannot be compared with the destruction caused both directly and indirectly by man. History teaches that no species has ever been exterminated by native natural enemies or by the elements. Those species which have been so ruthlessly and recklessly blotted out of existence owe their destruction to the agency of civilized man.

The reports on the diminution of bird life caused by man are tabulated to show the relative importance of each cause in the judgment of those reporting:

Tabulated List of Causes

<i>Cause</i>	<i>Number Reporting</i>
Sportsmen and so-called "Sportsmen".....	97
Negroes	96
Hunting out of season.....	69
Burning over woods and fields.....	68
Guns in the hands of irresponsible boys (and men)...	67
Cutting away fence-rows and hedges.....	58
Nest robbers.....	54
Market Hunters.....	54
Slingshots and airguns.....	37
Draining Swamps.....	32
Milliners' hunters.....	17
Clearing land	12
Increase in number of hunters.....	7
Pot-hunters	7
Destruction of cover and nesting sites.....	6
Increase in number of gunners from factories.....	4
Excessive hunting.....	4
Decrease in amount of grain sown.....	3
Hunting season too long	3

Tabulated List of Causes (Con.)

<i>Case</i>	<i>Number Reporting</i>
Increase in number of guns.....	3
Rapid transportation afforded by automobiles	3
Use of automatic and pump guns.....	2
Outside hunters from North.....	2
Trapping	2
Negro houses in corners of woods	1
Improvement in fire-arms and use of smokeless powder	1
Cheap guns.....	1
Fishermen who carry guns and shoot promiscuously..	1

Imported Enemies

Cats.....	52
English Sparrows	32
Dogs	31
Hogs	1

Sportsmen and So-called Sportsmen

Among all the forces which destroy bird life, in the opinion of those reporting on this question, the man who shoots takes first rank, ninety-seven votes placing him at the head of the list. Of the thirty-three causes of destruction given, twenty relate to shooting, six to man's activities which result in the destruction of food plants, nesting sites and cover, four to harmful species of animals which man has turned loose on birds. Of the three remaining causes given, nest robbing and trapping result in direct destruction while the decrease in the amount of grain sown would affect a species locally only.

Under present conditions, the only excuses which man can offer for his direct destruction of bird life are those of food and sport. Doubtless much barbarity is often practiced and many crimes committed in the name of sport. Today much is being heard of the "Ethics of Sportsmanship," and in, at least one of the sportsmen's

clubs of the country no dove shooter can enter,¹ and in others, no man is eligible for membership who uses a pump or an automatic gun.² With Mr. Forbush, the true sportsman recognizes that even a bird has some rights, and he is willing to give it, at least a chance for its life.

True sportsmen observe the spirit as well as the letter of the law. They recognize and respect the rights which others share in the birds equally with their own: The rights of the agriculturist, nature lover, student and teacher. True sportsmen are found in the ranks of conservationists, for not only do they wish the supply to last as long as they live, but they wish to hand down the heritage of wild life unimpaired to future generations.

Hunting Out of Season

That birds suffer an all-the-year-round persecution is shown by the reports of sixty-nine observers, who consider hunting out of season a great factor in the reduction of bird life. So-called sportsmen, negroes, pot-hunters and factory men and boys are mentioned as offending in this respect. Most of these persons are uninformed as to the value of birds and the provisions of the game laws. Many do not know the game from the nongame birds.

Mr. E. C. Epps, Williamsburg, considers hunting out of season the greatest cause of decrease. Mr. H. M. Stuart, Beaufort, writes: "Negroes are especially destructive to non-game birds and out of season." Mr. F. M. Weston, Jr., Charleston, reports: "Wild Turkeys and Doves diminishing from being continuously hunted, and out of season." Mr. A. T. Wayne, Charleston, adds as a cause of decrease: "Hunting Wild Turkeys and Woodcock out of season by white men."

In this connection, Mr. J. G. Chafee, Aiken, reports: "The greatest enemy of the Bob-white is the rabbit hunter who hunts at all seasons. During the nesting season and after the young are hatched, the woods are full of rabbit

¹Hornaday, W. T., *Our Vanishing Wild Life*, p. 106.

²Ibid, p. 152.

hunters with a pack of curs and hounds (half-fed) and every covey of young and every nest of eggs is eaten up. The next greatest enemy is the negro with his single barrel shot gun. He shoots at any season. He is no respecter of the mother bird on her nest or while caring for her young."

Plume Hunters

Seventeen reports show that certain species of birds are still being destroyed by milliners' hunters, despite the fact that such birds are on the protected list. In open defiance of the law, plumes from the American Egret are still displayed in the windows of some of the millinery stores in Columbia, and perhaps other cities, and the head-gear of some women bear evidence that the bloody work is still going on. This is a reproach to the State of South Carolina!

Several years ago the Least Terns on Bull's Island were exterminated by plume hunters. The American and Snowy Egrets were fast disappearing when the National Association of Audubon Societies thru its secretary, Mr. T. G. Pearson, located the remnants of a few colonies and employed special wardens to protect them during the nesting season, when the plumes are worn. The Charleston Museum also protects one colony and Mr. L. A. Beckman, superintendent of the Santee Gun Club, rigidly protects the fine colony which nests on the preserve in his care.

But for the protection afforded by these private agencies there is no doubt that the white herons in this State would be exterminated in one season. Mr. H. M. Stuart, Beaufort, writes: "Where I could show the nests and eggs of 500 white herons in season twenty-odd years ago, I could not show one now. There are a few small "hammocks" and ponds where the commoner species of herons breed yet, but I fear they will not last long."

Factory Men and Boys

Much of the decrease in the communities where there are factories is attributed to the numbers of guns in the villages, and the numbers of men and boys who use them against everything which moves. If factory men and boys were instructed concerning the value of birds, the provisions of the game laws and which are game and which are non-game birds, much of this destruction could be prevented.

In this connection Mr. Alex R. Taylor, Lexington, says: "Factory men and boys hunt irrespective of season, from June to June, and the fishermen usually carry guns and often destroy rare birds." Mr. G. E. Holland, Greenville, reports: "The negro and factory element go out in squads and kill everything in sight, in winter when they have nothing to do." Mr. James MacEnroe, Greenwood, writes: "There seems to be a gun in every house in our village and an inborn desire to kill everything that moves."

Nest Robbers, etc.

Nest robbers and irresponsible boys with slingshots, airguns and rifles are ranked high among the agencies most destructive to bird life. In some places an enlightened public sentiment has reduced the number of nest robbers, while in other sections the practice still receives public sanction.

It is unlawful to take eggs from the nests of birds protected by law, except for scientific purposes, and only after having procured the necessary permit from the Secretary of State, which permit holds good for only one year. During the year 1915, only three permits were issued in this State. Notwithstanding this fact, collections of bird eggs are being made, to say nothing of the eggs which are stolen and destroyed in pure wantonness. No bird skin is to be prepared without a permit from the Secretary of State. Nevertheless many would-be collectors are making bird skins without permits.

Boys who are allowed to run amuck with slingshots, airguns, .22 caliber rifles, etc., slay their thousands. Dr. W. C. Kollock reports that a boy was seen near the Charleston Country Club on Thanksgiving Day with five Mockingbirds. Mr. F. L. Willcox, Florence, believes that next to the cat, the greatest enemy of song and insectivorous birds generally, is the small boy. Mr. R. B. Belser, Sumter, considers that, in the destruction of small birds, boys with the above mentioned weapons will take front rank.

It is deplorable that the young in the most formative period of their lives are permitted and encouraged to expend upon the destruction of a public resource the energy and means which should be used in its conservation. If civilization rests on obedience to law, the young who engage in this slaughter in defiance of the law, are worse than savages. There should be an age limit for shooters, and children should be taught at home and in school, the reasons why the State and Nation protect birds, and the seriousness of breaking of these laws. Such instruction could be made one of the best means of training in good citizenship.¹

Destruction of Cover, Nesting Sites, Etc.

Burning over woods and fields, cutting away fence-rows and hedges, draining swamps, clearing land, cutting away undergrowth, shrubbery and vines affect birds injuriously thru the destruction of their nesting sites, cover and food plants. Burning over woods and fields in the spring destroys the nesting sites, nests, and often the young of many birds. Sixty-eight observers report great destruction from this source.

As population increases, the forests must give way to cultivated fields. Fortunately few species inhabit deep forests. Most of them prefer small wooded areas near cultivated fields, gardens and dwellings, provided they

¹Hodge, C. F., *Nature Study and Life*, p. 306.

find enough nesting sites, shelter, food, water and safety to make it attractive to them.

Every scheme for clearing or draining land or for replanting land which has already been cleared, should take into consideration the requirements necessary for attracting and holding the bird population. It should be an easy matter for every farmer to leave fence-rows, hedges, tangles of blackberry vines, wild honeysuckle, bamboo and plum thickets for his friends, the birds. Useless burning of woods and fields should cease.

The Exterminative Practice of Market Hunting

That the deadly and iniquitous practice of market hunting is resulting in the steady slaughter of our game birds is shown by the reports of fifty-four observers from almost every county in the State. Mr. D. H. Trezevant, Calhoun, considers this to be one of the most potent causes of decrease. Dr. W. T. Hornady says: "There is no influence so deadly to wild life as that of the market gunner who works six days a week from sunrise until sunset hunting down and killing every game bird that he can reach."¹

The market hunter kills as many birds in a day as possible. That is his "business." The higher the price per bird that he receives in the market either for food or hat trimmings, the more birds he tries to kill. The lower the price, the more he must kill. The reports of more than half a hundred observers show that the few restrictions placed upon the killing and sale of game are successfully evaded. The game of the State belongs to the whole people of the State and market hunting is a class privilege and a robbery of the people at large.

Pothunting

The pothunter is also one of the most pernicious enemies of bird life. Neither the market nor pothunter has any scruple as regards how or where they procure their prey.

¹Hornaday, (W. T.) *Our Vanishing Wild Life*. p. 64.

Several reports show that pothunting goes on all the year round, in season and out. Mr. J. G. Chafee, Aiken, considers the pothunter one of the worst enemies of the Bobwhite, and reports: "The pothunter shoots them on the ground, traps them, etc." Food is so plentiful and so easy to obtain with a little work, that there is no excuse for pothunting. The birds which still remain to us are too valuable as crop-protectors and as objects of sport and study, to be exterminated by the pothunter and market hunter.

Automobiles, Etc.

Decoys, blinds, traps, baits, automobiles, improved firearms and smokeless powder all have their part to play in the drama of destruction. Mr. W. A. Klauber, Bamberg, says: "The automobile is the bird's worst enemy, as it enables sportsmen to go from fifteen to twenty-five miles from town in one afternoon." Mr. A. L. Youmans, Hampton, believes that the automatic and pump gun and hunting out of season are the greatest causes of decrease of game birds.

Mr. A. J. Cox, Williamsburg, writes: "So-called sportsmen who live in town, own automobiles, kennels of dogs and automatic guns cause the greatest destruction." Mr. F. L. Willcox, Florence, considers the decrease of Bobwhite due to hunters and the greater facility for transportation afforded by automobiles. Michigan is one of the first States to restrict hunting of game by automobiles. The game laws as amended by the last legislature of that State prohibit the use of automobiles in hunting Bobwhites.

The army of gunners which takes the field every fall is larger and better equipped than the one which preceded it. Speaking of conditions of thirty or more years ago, Mr. Frank Hampton, Richland says: "In and near Columbia, not more than twenty people did much shooting. Two-hundred would be a conservative estimate now, and with better guns and ammunition and automobiles to take them thirty miles into the country, instead of from two to

six miles of thirty years ago, it is going to be a hard job to check the slaughter. Short season and strict enforcement of the law may help." Mr. B. D. Dargan, Florence, estimates that gunners have increased two-hundred per cent in the last four or five years. In the meantime, improved guns, and other mechanical agencies of destruction, dogs, cats and English sparrows have increased in proportion.

Negroes

The reports show that as an agency of destruction, the negro, armed with his cheap gun, and with packs of half-starved, mongrel dogs at his heels is a terrible scourge to wild life. He kills in season and out of season, non-game as well as game birds. He is a pot hunter of the worst type. He robs nests, shoots Bob-whites on the ground and kills the parent birds. His cabins are often built in the corners of woods and other isolated places, and thus he is enabled to roam the country and shoot indiscriminately without fear of detection. During the nesting season his half-fed dogs scour the woods and fields and destroy all the eggs and young of ground nesting birds which they can find. Why do sportsmen permit such slaughter?

In the judgment of ninety-eight observers, awful destruction results from this source. Maj. Harry Hammond, Aiken, reports, that gunners have been trippled since the negro acquired the use of the shotgun, and that dogs have also greatly increased. Mr. G. A. Jennings, Bamberg, writes: "Decrease in Bob-whites caused principally by breech-loading shot-gun and the accuracy of the negro's aim which he has acquired in the last twenty years." Capt. S. G. Stoney, Charleston, reports: "The negro with the single barrel breech-loader is responsible for the greatest destruction of song and all other kinds of bird life." Mr. Cleveland Saunders, Colleton, writes: "The Partridge is killed in mating season with a shot-gun. Every negro owns a single barrel shot-gun." Mr. B. D. Dargan,

Florence, says: "Negroes do a great deal of harm by shooting and trapping."

Mr. M. S. Haynesworth, Florence, writes: "All kinds of birds are indiscriminately slaughtered by negroes just for the fun of it." Mr. F. L. Wilcox, from the same county, reports: "Numbers of Bob-whites are killed in mating season along the roads which are favorite places for wallowing, and which the negro travels nearly always with a single barrel gun." Mr. J. F. Bamberg, Bamberg, writes: "Every negro in this section carries a gun in his buggy or wagon." Mr. H. M. Stuart, Beaufort, reports: "The negro carries his cheap gun instead of a walking stick all times of the year. Everything not tame is his game."

Mr. Karl Dargan, Darlington, says: "Destruction is done by negroes who do not know the value of birds." Mr. J. E. Singletary, Berkeley, writes: "Negroes are very destructive to bird life." Mr. E. L. Wells, reports from the same county: "The negro is more destructive to bird life, in season and out of season, than all other causes combined." Mr. Patrick Wall, Beaufort, reports: "There are negro pot hunters who shoot game of all kinds at all seasons." Mr. Wayne writes: "The greatest enemy is the negro who never passes a nest of this fine bird (Bob-white) without taking the eggs even when they are on the point of hatching."¹

The killing of Cardinal or Redbird for use as fish bait has come under the writer's observation. Negroes have never been taught the value of birds, neither have they systematically restrained from promiscuously killing them.

Natural Enemies Introduced by Man

The most harmful of all natural enemies of bird life are those which have been brought into this country by man. The destruction caused by hawks is not to be compared to that done by cats because the latter are so much more numerous. Fifty-two correspondents report the cat as one of the worst enemies of birds.

¹Wayne, A. T. *Birds of South Carolina*, p. 64.

Dr. W. R. Eve, Beaufort, writes: "Cats destroy a great many birds especially Mockingbirds." Mr. J. C. Dye, Chester, reports: "House cats are one of the worst enemies." Mr. H. E. Ketchin, Fairfield, writes: "Cats do most harm by catching young birds just after they leave the nest." Not only is harm done by homeless stray cats, but by well-fed house cats, also. Cats prowling at night destroy many nests. Mr. E. H. Forbush, State Ornithologist of Massachusetts, estimated that in good hunting ground each mature cat will kill on an average fifty birds a year. He reports that a well cared-for pet cat killed fifty-eight birds in one season, including the young in five nests. Every cat found hunting out in the open should be killed at once, and all homeless cats and superfluous young kittens should be disposed of kindly and painlessly.

A great injury was done many species of smaller birds when the English Sparrow was introduced a little more than sixty years ago. Owing to its rapid increase it has spread all over the country and has driven many song birds away from towns and cities. Mr. J. M. Johnson, Jr., Marion, writes: "The purple Martin visits this community in small numbers, while not more than three years ago they were by thousands. I believe the English Sparrow is largely responsible for the scarceness of the martins, for the almost imperceptible recovery of the Bluebird from the effects of the 1898 blizzard, and for the banishment from the city districts of almost all bird life." Mr. F. L. Willcox, Florence, reports: "The Purple Martin has been driven out largely by English Sparrows.

English Sparrows mob other birds, take the nesting sites, break up the nests, destroy the eggs, kill the young and make themselves so thoroly despicable that no self-respecting bird wishes to live near them. The Mockingbird, Bluebird, Wren, and Purple Martin have suffered especially from this pest. Any plans for attracting and protecting our native song birds, especially those nesting near dwellings, must include warfare against this enemy. Persons interested should write to the U. S. Department

of Agriculture, Washington, D. C., for bulletin entitled, "The English Sparrow as a Pest."

The dog is reported as being one of the most potent causes of the destruction of certain birds. This subject will be discussed in connection with the reports concerning the destruction done by dogs roaming at large during the birds' breeding season.

Doubtless more destruction than is realized is done by hogs to ground nesting birds. On this subject Mr. C. J. Epps, Horry, says: "Owing to no fence law, hogs destroy many partridges, breaking up nests and eating young ones."

The Awful Destructiveness of Dogs.

To the request for reports concerning the degree of injury done by dogs roaming at large during the birds' breeding season, 138 replies were received. Of these 8 correspondents report not knowing and 5 report no damage in their localities. Mr. C. S. Saunders, Colleton, writes: "None to my knowledge and I own 12 hounds and 2 bird dogs."

Counties reporting the least destruction from this source are: Colleton, Dorchester, Horry, Jasper, Georgetown, and Oconee. All are on or near the coast except one.

Forty respondents report damage ranging all the way from "none hardly" (6), "not much" (18), to "not a great deal" (16). The degree of injury estimated by the remaining 85 ranged all the way from 20%, 50% and 75% to "destruction of all nests and young found." Of this last number many hesitated to make an estimate of percentage, describing the destruction as "vast", "immense", "tremendous", and "more than from any other source."

In an estimate of the damage done by either cats or dogs the personal element will enter largely. It is difficult for the owner of a cherished pet cat or a well beloved dog to believe that the animal in question is destructive to the nests and young of birds. But the evidence derived from this investigation and from investigations conducted by others in other parts of the country shows that the

well-fed cat and the well-cared-for dog take their toll of bird life, to say nothing of the injury done by the countless numbers of homeless cats and half-starved, half-breed dogs which overrun the country.

The reports show that the destruction is great to ground nesting birds, the noble Bobwhite being the chief sufferer. The following varieties of dogs are mentioned as doing the harm: Bird dogs, half-breed pointers and setters, roaming dogs, curs, hounds, mongrels, the "yaller dog", half-fed curs, half-breed dogs, half-starved curs of bird dog mixture, stray dogs, loose curs, half-starved hounds, etc. Most of these except bird dogs are spoken of as "belonging mostly to negroes and irresponsible parties, living off the country and generally escaping taxation." Mr. Patrick Wall of Beaufort estimates that they do 20% of the injury. He writes: "These dogs belong to negroes who do not feed them. They break down our corn and eat it from the time it is in the mutton until it is harvested."

Mr. E. C. Epps, Williamsburg, says: "It is impossible even to estimate this loss." Mr. J. H. Steele, York, says: "The negro and his dog do more damage to birds than natural enemies, both in a direct and an indirect way." Mr. C. W. Boykin, Williamsburg, reports: "Yellow dogs and starved out negroes' dogs are very destructive to the nests and young of birds." Mr. L. W. Boykin, Kershaw, believes: "50% of the destruction to Bobwhites is done by stray or half-breed dogs belonging to negroes. They have a good chance to break up nests on account of the scarcity of cover."

Mr. B. D. Dargan, Florence, writes: "Considerable destruction is done by poorly fed and half-breed dogs which have to get their living the best they can." Mr. E. M. Andrews, Darlington, writes: "Fifty per cent of destruction is done by bird dogs loping around in spring and summer." Dr. L. B. Bates, Calhoun, reports: "Very great destruction is done as negroes own a great many dogs which have to hunt for their living. Not only bird dogs but all kinds of dogs do this destructive work." Mr.

F. M. Weston, Jr., Charleston, writes: "Dogs destroy a number of Bob-white nests, but the destruction does not seem to have any marked effect upon the numbers of species." Mr. Orville Calhoun, Abbeville, says: "Poorly fed dogs which live in summer by hunting eggs, etc. and generally escape tax, are the most important cause of decrease, especially to those which nest on the ground." Mr. H. C. Summers, Anderson, reports: "Considerable damage is done by countless half-fed dogs which roam the fields night and day, owned mostly by negroes." Mr. R. B. Belser, Sumter, writes: "Very considerable destruction is done by roaming dogs of negroes, which suck the eggs and break up the nests of ground-nesting birds." Mr. A. R. Taylor, Lexington, believes: "Dogs belonging to negroes and other irresponsible parties who let them roam the fields to forage do immense damage." Mr. J. M. Whitehead, Union writes: "Roaming dogs do as much damage perhaps, as any two or three other destructive agencies combined." Mr. W. C. Shaw, Anderson, reports: "Bird dogs hunt the nests of birds and destroy hundreds of them." Mr. W. R. Smith, Sr., Newberry, is of the opinion that half-starved mongrel dogs owned by negroes and irresponsible parties, by breaking up the nests and destroying the young of birds, cause seventy-five per cent. of the decrease." Mr. A. A. Coleman, Greenwood, reports the following case as convincing evidence in his opinion, of the harm which stray dogs do: "On a farm of about six thousand acres where practically all the tenants are negroes who own various kinds of dogs, there is a very strict rule that all dogs running loose in summer shall be shot. Altho there is about as much hunting on this place as on adjoining places, with cleared land and cover about the same, there is twice as much game."

There seems to be no doubt that the State is full of worthless dogs which escape taxation. An interesting and enlightening illustration has been furnished by the city of Florence. Last September, a census was taken of the Florence school district, as required under the compulsory education law. To the one hundred and twenty dogs

reported to the auditor, five hundred and forty-four more were added by the census taker. Mr. Hartwell M. Ayer, a member of the school board, writes: "The census taker did not get half the number as it is. I, for one, can add a dozen to their list, but they got all they could see around the places, and that the people would admit they had. They would deny owning a dog that barked at the census taker when he went into the yard." It is probable that this condition of affairs is typical of what exists in other parts of the State.

Not only do hungry roaming dogs do immense damage in summer by destroying birds and living on the community generally, but they are a great menace on account of hydrophobia. The dog population of the State should be reduced, not only from principles of economy and as a safeguard to the health of the community, but from humane sentiments also.

The Barbarous Practice of Dove Baiting

There are only two States in the South in which dove baiting, or shooting doves over baited fields, is practiced. South Carolina is one of them. The sportsmen of Georgia brought about the cessation of the custom in their state several years ago.

Doves flock to baited fields in large numbers. In order to have the birds come within easy range, gunners erect blinds from which they pour forth a murderous fire with pump and automatic guns. The doves which escape the first deadly assault return for the next volley, and this they continue to do, in reduced numbers thruout the day, giving the shooters an opportunity to fire at each dove time and time again.

The reports show that the counties in which dove baiting prevails to a large extent are: Aiken, Bamberg, Barnwell, Calhoun, Orangeburg, Spartanburg, Edgefield, Hampton, Jasper and Kershaw. To a lesser degree it is practiced in Abbeville, Saluda, Anderson, Lexington, Beaufort, Richland, Sumter, Charleston, Clarendon, Darlington, Dillon, Horry and Lee.

Mr. John G. Chafee says that dove baiting prevails to a large extent in Aiken county and that doves seem doomed to extermination. Mr. Ashton Head of the same county writes: "Wheat fields have been sown for the last fifteen years for dove shoots. I have known as many as four hundred doves to be killed in one wheat field in one day." Mr. H. M. Stuart of Beaufort says on this subject: "Dove baiting prevails in my county in only a small way, but they are overshot and their nesting places are becoming scarce." Mr. Idis Brabham, Barnwell, writes: "Doves will be exterminated in a very short time if dove baiting continues. Dr. L. B. Bates of Calhoun believes that doves are near extermination from baiting and shooting. He writes: "Hundreds are killed in one afternoon. When ground is plowed over and food is scarce they flock to baited fields and are subjected to a merciless slaughter." Mr. A. L. Youmans, Hampton, writes: "Dove baiting is practiced in this county, is very destructive and should be stopped." Mr. F. H. Arrants, Kershaw, believes that the practice should be stopped. It prevails in his county to some extent. Mr. B. F. Taylor, Richland, reports: "No baiting, but fields uncut draw droves and they are then shot in large numbers." Mr. W. C. White, Chester, writes: "No real baiting but a good many are shot in their feeding places, such as wheat and stubble weed fields."

In allowing doves to be slaughtered over baited fields, the reduction in numbers may not only affect South Carolina, but other States as well. A letter for information on this subject was sent to Dr. Wells W. Cooke, of the Bureau of Biological Survey, the authority on bird migration in this country, and the following reply was received: "Concerning the doves which winter in your neighborhood, it is absolutely impossible to say where those particular individuals nested. The probability is that you have with you thru the winter some individuals which nested in South Carolina, and also others which nested all the way from there to southern Canada."

If this be true, this State not only depletes her own crop of doves but that of other States, also. Doves are among

the most valuable weed seed destroyers, and South Carolina should follow the good example set by Georgia and speedily enact proper legislation for their protection.

Knowledge of, Respect for, and Enforcement of the Game Laws

The replies to requests for information concerning the knowledge of, respect for and enforcement of the game laws have been classified thus:

	<i>Yes</i>	<i>To a Certain Extent Only</i>	<i>No.</i>
KNOWN	66	43	38
RESPECTED	34	53	47
ENFORCED	18	20	65

While the laws are very probably well known to all true sportsmen, it is almost absolutely certain that they are unknown not only to the vast majority of those who contribute to the many ways of destroying bird life but to the public at large. A reference to the summary of causes of decrease of bird life on a preceding page leads to this conclusion.

A public uninformed as to the provisions of State and National game laws can hardly be expected to demand the enforcement of these laws, or to support the game wardens in the discharge of their duties. Many persons who make an honest effort to acquaint themselves with the State game laws are discouraged by the barriers presented by the lack of uniformity of these laws. One report reads: "The laws are respected by the better element of gunners where known and understood."

Of the one hundred and thirty-three who responded to that portion of the question in regard to the enforcement of the laws, eighteen report the laws enforced; fifty report enforcement to a certain extent only; sixty-five report non-enforcement.

As regards enforcement, the answers which have been placed under the head, "To a certain extent only," include such terms as "fairly well," "reasonably well," "per-

functorily," "partially," "slightly," "scarcely ever," "seldom," "not much," "very little," and on down to "absolutely disregarded." Five correspondents report laws enforced by private landowners; 3, laws known, respected and enforced better than formerly; 3, laws enforced better recently; 2, prospects better for enforcement this season than ever before; 2, not enough game wardens; 1, law as to partridges better enforced than law as to small birds; 1, game laws very complicated and no effort toward enforcement; 1, enforced by private landowners, conscientious sportsmen, and law-abiding citizens; 1, better spirit developing toward the game laws; 1, game laws not generally understood; 1, negroes, small boys and factory class know no difference between game and non-game birds.

Col. J. C. Stribling, Anderson, writes; "Laws known but not respected as they should be, altho better than they have been for several years." Mr. J. G. Chafee, Aiken, reports: "Game laws of South Carolina very complicated. In Aiken county, absolutely disregarded. No effort toward enforcement." Mr. J. E. Singletary, Berkely, believes: "Laws disregarded. No one to enforce them."

Mr. C. S. Saunders, Colleton, reports: "Laws not enforced." Mr. J. D. Holstein, Edgefield, writes: "Laws not well known, still less respected and not enforced." Mr. Jas. E. Bryan, Horry, says: "Laws relating to migratory birds not generally known." Mr. J. W. Canty, Kershaw, reports: "Laws not accurately known, but little respected except by sportsmen, and not at all enforced." Capt. S. G. Stoney, Charleston, writes: "Laws not known, respected or enforced."

Mr. L. A. Beckham, Charleston, reports: "Laws generally known, respected by law-abiding citizens and enforced by private landowners, but not by game wardens." Mr. F. M. Weston, Jr., Charleston says: "Laws not widely known, not at all respected and seldom enforced." Mr. A. K. Smoak, Calhoun, believes: "Laws enforced; we have a very efficient game warden." Mr. W. C. White, Ches-

ter, writes: "Game laws not well known, reasonably well but very rarely enforced."

Mr. R. S. Rogers, Dillon, reports: "People do not generally hunt out of season. Fish are netted in open violation of the law." Mr. L. A. Walker, Dorchester, writes: "Laws not well known, only in part respected, and not enforced." Mr. W. B. Ryan, Jasper, says: "Laws known, but neither respected nor enforced." Mr. A. R. Taylor, Lexington, reports: "Laws are known and respected by the old hunters but not by the factory class. Not enforced." Mr. W. L. Sanders, writes: "Only partially enforced and not generally understood." Mr. H. W. Beall, Sumter, says: "Laws very well known, slightly respected and hardly ever enforced." Mr. A. J. Cox, Williamsburg, reports: "Laws not known, respected or enforced." Mr. W. H. Wylie, Chester, reports: "Laws not fully known, and where known, are not respected by even white people who claim to be Christians."

Several reports show that the game laws are being enforced better than ever before, especially during the last three years, or since there has been a regularly salaried officer; that the laws protecting game birds are better enforced than the laws protecting non-game birds; and there are not enough paid game wardens. Mr. C. F. Dill, Greenville, writes: "Birds decreasing from lack of enforcement of the laws. No warden except the chief is paid a salary for lack of funds." The further conclusion is reached that the public is woefully ignorant of the game laws and that these laws are neither observed nor enforced as they should be.

Suggestions by Observers for the Better Protection of Birds

If any further doubt exists that an average or fair and unprejudiced opinion places on man responsibility for the greater part of the destruction of our valuable bird life, a reference to the tabulated list given below of the suggestions by observers for the better protection of birds against man and their natural enemies will be convincing.

Of the 112 suggestions received, only 8 are for coping with the causes for which man is neither directly nor indirectly responsible (natural enemies). The suggestions for better protection have been arranged under the following heads, with the numbers reporting each: Education, 33; Enforcement of law in general, 37; Tax on dogs, 46; Tax on guns, 15; Cats, 7; Game wardens, 19; Hunting license, 12; Season limit, 18; Natural enemies, 14; Miscellaneous, 22.

Education

Educate people to appreciate good that most birds do, 12; Educate thru schools, newspaper publicity bureaus, etc., 8; Teach children thru public schools the value of birds, 5; Teach importance of birds to agriculture, 2; Have every school in the State teach the value of birds, 2; Education of boys as conducted by the Charleston Museum, 1; Farmers teach negroes the value of birds, 1; Have Bird Day in schools, 1; More publicity, 1.

Enforcement of Laws in General

Enforce laws on statute books, 15; Better enforcement of present laws, 7; Strict laws, 4; More stringent laws, 2; Enforce laws protecting small birds, 2; Appreciation and enforcement of game laws, 1; Enforce game laws by imprisonment, no fines, 1; Rigid enforcement of present laws, especially against nest robbers, 1; Enforcement of laws protecting non-game birds, 1; Enforcement of laws as regards season, 1; Enforcement of laws against white man as well as negro, 1; If possible enforce law but juries will not convict, 1; Rigid enforcement of present laws, 1.

Tax on Dogs

Confine dogs during birds' breeding season, 11; Kill all mongrel roaming dogs, 10; Tax dogs \$5 each, 3; Dog tax, 3; Tax dogs \$2.50 each, 3; Dog and gun tax, 2; State and county tax on all dogs from \$1 to \$5 each, 2; Dog law, 1; Tax dogs \$3 each, 1; Dog and gun license, 1; Higher tax

on dogs, 1; Tax bird dogs \$5 each, 2; Heavy tax on bird dogs, 1; Keep dogs muzzled during birds' breeding season, 1; Heavy tax on female dogs and premium on every one killed after having been seen three times without tax collar, 1; Curtail numbers of negroes' half-fed dogs, 1; High dog license to prevent negroes from having so many, 1; Strictly enforced dog and gun license, 1.

Tax or License on Guns

Tax guns \$2.50 each, 1; Shot gun tax, 1; High tax on guns, money to be used for school purposes, 1; Gun and dog license, 1; Gun and dog tax, 1; Tax shot gun and rifles, 1; Gun tax and hunting license, 1; Tax with license on every shot gun and sporting rifle \$2.50 per year, 1; Statewide hunters or gun tax, 1; Statewide gun license, 1; Every shot gun \$1 license, 1; Statewide hunting or gun tax no exemptions, 1.

Hunting License

Resident hunting license, 3; Make hunting license \$25, 1; Hunting license \$3, 1; License for merchants who sell guns, 1; License for carrying gun at all, 1; Hunting license in addition to gun tax, 1.

(As the material from which this report is compiled is drawn from replies to a questionnaire sent out before the resident hunting license law became effective, in order to get an average of opinion as to the effects of the said law and bring the subject matter up-to-date, requests for information were submitted to those men who had been public-spirited enough to reply to the former inquiry, in those counties fortunate enough to have the resident hunting license law. A discussion of the matter contained in these replies will be given later.

Season Limit

Short hunting season, 6; Closed hunting season, 3; Uniform open season for all coast counties, 1; Closed hunting

season from 3 to 5 years, 1; Closed season for several years, 1; Five year close season for Wood Duck, 1; Close season for 2 years, 1; Reduction of open season to two months, December and January, 1; Close hunting for 2 years, 2; Close hunting season from 2 to 3 years, 1.

Game Wardens

Paid game wardens, 10; Game wardens who will do their duty, 6; Active wardens in every township or locality, 3; Better game wardens, 3; More game wardens, 2; Game wardens appointed by reason of fitness, 2; Wardens working in conjunction with rural police, 1.

Cats

Kill stray cats, 2; Kill nine-tenths of the house cats, 1; Cat tax, 1; Tax cats fifty cents, 1; Confine cats during birds' breeding season, 1; Better laws as to cats which run at large, 1.

Natural Enemies

Bounty on hawks, 3; Bounty on English Sparrows, 2; Destroy natural enemies, 2; Rigid warfare on natural enemies, 2; Bounty on skunks and other vermin, 1; Encourage destruction of hawks, 1; Reduce number of crows, 1; Reduce number of jays, 1; Reduce number of foxes, 1.

Miscellaneous

Prohibit use of traps, 5; Limit number of hunting days a week, 3; Limit number of birds killed in a day, 1; Post land, 3; Restore forests, 1; Do away with modern fire-arms and call back old muzzle-loading shot gun, 1; Completely stop man, 1; Make it a serious crime to kill any bird and reward the informer, 1; Limit number of birds to each gun including ducks, 1; Let the birds alone, 1; Make game and fish laws intelligible, 1; Prohibit Sunday hunting, 1; Provide more nesting sites, 1; Co-operation of county, town and city officials in the enforcement of the game laws, 1;

Make it a chain gang offense to kill any bird at any season,
1: High non-resident hunting license, 1.

A Discussion of Some Suggestions Given by Observers for the Better Protection of Birds

The three most important suggestions given in the above table are: 1. Education of the masses as to the value of birds. 2. Uniform game legislation. 3. Paid officers to enforce the law.

Education

Thirty-three observers report education as the most vital need in solving the important problem of bird protection. The suggestions made for effecting this are: schools, newspapers, lectures, bulletins and discussion and agitation of the subject whenever and wherever possible. Mr. Neils Christensen, Beaufort, sums up the matter thus: "Educate the people. As soon as they know the facts they will demand laws and their enforcement." A particularly valuable suggestion is made by Mr. Karl Dargan: "Farmers should teach negroes the value of birds." Mr. F. L. Willcox, Florence, reports: "Negroes, small boys and aliens know no difference between game and non-game birds." Mr. P. V. Moore, Spartanburg, suggests: "A campaign of education showing farmers the economic value of birds as insect destroyers." Mr. C. J. Epps, Horry, suggests: "Have the public schools especially in the country teach children the value of birds." In some States it has been found that even the game wardens did not know the game from the non-game birds.

The game warden department is supported by the game protection fund, but not one dollar of the State's money is being expended for the education of the people in bird protection, so that they will hold up the hands of the chief game wardens and his deputies in the performance of their duties. Because of this the usefulness of the State game department is largely nullified. Were it not for a few public spirited individuals working mostly thru

the State Audubon Society, there would be no organized effort in the direction of this important work.

Reports from Charleston show that the work of the natural history society of the Charleston Museum in fostering bird is most valuable. Several reports from different sections of the State bear witness to the effective work done in the interest of bird protection a few years ago by Mr. B. F. Taylor, president, and Mr. James Henry Rice, secretary, of the State Audubon Society. As field agent for the National Association of Audubon Societies, Mr. Rice carried on an important campaign for the study and protection of birds.

The attention of teachers and bird students is called to the valuable work being done in cooperation with the schools of the country by the National Association of Audubon Societies thru its secretary, Mr. T. Gilbert Pearson, 1974 Broadway, New York, in the formation of junior audubon classes. By paying only ten cents each child may become a member of a junior audubon class whose object will be to study and protect wild birds. This money is sent in to Secretary Pearson by the teacher and each child receives the beautiful audubon button and a set of ten colored pictures with outline drawings and descriptive leaflets. The teacher receives a year's subscription to "Bird-Lore," the best bird magazine published.

Bird study is so necessary it should be compulsory in the schools. Bird study is of so much importance to agriculture it should assuredly form a part of any course of instruction to farmers. It is just as necessary and perhaps more so, to have a State ornithologist as it is to have a State forester, geologist or entomologist.

The three agencies thru which this knowledge could be spread abroad are the public schools, farm demonstration work and newspapers. State boards of agriculture, farmers' unions, agricultural societies, educational institutions, sportsmen's organizations and federations of women's clubs should give active support to all measures which will help to maintain or increase all kinds of wild birds.

Enforcement of the Game Laws

The striking fact brought out by the suggestions from thirty-eight observers regarding the enforcement of the game laws are: 1. Present laws are not enforced as they should be. 2. Game birds are better protected than non-game birds. 3. Juries are hesitant about convicting for offenses against the game laws. 4. Fines are not so sure a deterrent or so great a punishment as imprisonment would be. 5. Laws are more rigidly enforced against the negro than the white man.

A careful study of the situation leads to the conclusion that this condition of affairs is not the fault of the State game department, but is due: 1. To a lack of knowledge on the part of the public of the value of birds and the need for the enforcement of the laws protecting them. 2. To defects in the laws themselves. Mr. H. M. Stuart, a sportsman-naturalist of thirty-five years' experience, suggests: "Cut out all the useless trash in the game laws, (about one-half), local privilege passed by interested persons, etc., make what is left concise and standard for all sections, and enforce it by reliable, paid officers." Proper game laws, properly enforced are neither undemocratic nor unrepubli- can. They are essentially in the interest of the people as a whole.

As regards non-game birds, the most important legislation ever enacted in South Carolina for bird protection was the Audubon Law, passed in 1905, which extended protection to none-game birds. This measure was due to the initiative and untiring efforts of Mr. T. G. Pearson, secretary of the National Association of Audubon Societies, and Mr. B. F. Taylor, president of the State Audubon Society.

Reduction in Natural Enemies

The evidence of the causes of decrease proves that the injury from this source, leaving out the English Sparrow, is inconsiderable except in some localities where the native natural enemies of the harmful species have themselves been destroyed. The experience of those States which

have tried bounty legislation shows that such a method is unwise.

Besides being an expense to the State, bounty laws encourage idleness, by inviting loafers to roam the woods and fields at all seasons, and as a consequence all kinds of birds would be destroyed. A bounty on English Sparrows would result in the destruction of many of our native useful species, for few people know the difference, and besides there are other ways of dealing with this pest. A bounty on hawks would cause many beneficial ones to be killed. In paying the bounty, a competent naturalist would have to be employed in each county to pass on the birds.

Bounty laws work injury to agriculture. In any discussion of this subject the case of Pennsylvania is always cited. In 1885 a law was passed providing for the payment of a bounty of fifty cents each for the scalps of hawks and owls. This caused wholesale slaughter. In ten years, 180,000 scalps had been brought in, and \$90,000 paid out. It was estimated that the loss to the agriculture of the State in two years from mice, rats, and insects which had been held in check by these hawks and owls, amounted to \$2,000,000, and the law was quickly repealed.

One observer reports: "In burnt lands hawks do most harm. Burning of country should be prohibited until hawks migrate." On this subject it is instructive and interesting to quote what Wayne says: "When the woods and fields are annually burnt over, the smoke attracts nearly all the Sparrow Hawks in a radius of many miles, who come to feed upon grasshoppers, crickets and other insects that are trying to escape from the flames. On this occasion it is not unusual to see besides the Sparrow Hawks, numbers of Red-tailed and Florida Red-shouldered hawks. These hawks are so intent upon catching insects that they seem to be utterly oblivious of the smoke and sparks."¹

¹Wayne, (A. T.) *Birds of South Carolina*. Charleston Museum, Charleston, S. C., p. 79.

The presence of large numbers of any species of birds in any locality, is not always conclusive evidence that they are up to some mischief. More often the opposite is the case. Only two or three species of hawks and one of owls are injurious. It is a good business proposition to learn to distinguish the beneficial from the harmful ones, and the former should certainly be included in the list of birds protected by the State.

Season Limit

Of the eighteen observers who made suggestions in regard to the season limit, eight advocate a reduction of the close season, and ten suggest a close season of different periods on all game birds or on certain species only.

Mr. R. M. Cooper, Jr., a sportsman of Lee, writes: "Reduce hunting season (for instance on Partridges) to months of December and January." Mr. G. C. Cabell, Orangeburg, suggests: "The bird season should open December 1, and close January 31. That will give all lovers of the sport ample time to hunt." Mr. T. W. Brunson, Jr., Hampton, suggests: "Cut hunting season from March 15, to February 15." Mr. G. A. Malloy, Chesterfield, writes: "Allow no hunting for three years or cut hunting season one-half." Mr. Frank Hampton, Richland, suggests: "A short season and the same for everything. No dove shooting in August. Start when the bird season opens November 15, or later and when the gun is put away let it be until the next 15th of November."

Mr. W. R. Smith, Sr., Newberry, writes: "All hunting should be prohibited for three years. Otherwise our game birds will be exterminated in less than five years." Mr. L. W. Boykin, Kershaw, suggests: "A close season on Wood Duck for five years or three years at least." Mr. G. E. Holland, Newberry, writes: "There should be a law to prohibit the killing of birds for at least two years, and be much restricted after this." "Shorter open seasons will help, but unless the season is made of uniform length, it is ineffectual to shorten season on one species; for when men are in the fields with guns in their hands all game

birds will be shot." Good judgment requires that there should be a close season of a number of years on those species which are nearing extinction. No true sportsman could object to that, especially as the birds do not belong exclusively to him.

Cats

Many suggestions are for measures to reduce the numbers of superfluous cats. Mr. B. F. Taylor, Richland, writes: "Kill nine-tenths of the house cats." Mr. W. D. Brown, Beaufort, suggests: "Better laws as to cats which run at large." The seriousness of the problem is beginning to be felt all over the country. Unsuccessful attempts have been made in New York, Massachusetts and New Jersey to secure State laws for restricting vagrant cats.

The town of Montclair, N. J., has just passed a law to prevent unidentified cats from roaming at large in the streets. Such legislation is kindness to the cats as well as protection to the birds. The Society for the Prevention of Cruelty to Animals put to death nearly 200,000 cats year before last in New York City alone. The cat is recognized as such a destructive agency that it is banished entirely from any place made especially safe and attractive to birds.¹

Dogs, a Curse to the Birds of South Carolina.

Significant of the harm which is done by roaming dogs to wild bird life, is the fact that the largest number of measures proposed by observers are for coping with this problem. The principal suggestions are: First, a good high State-wide tax which will result in a large reduction in the numbers of dogs. Second, confinement or muzzling of the remainder during the bird's nesting season. In order to make the law effective, every dog upon which the tax has been paid, should be required by law to wear a tag

¹Forbush, E. H., *The Domestic Cat*. Massachusetts State Board of Agriculture, 1916.

bearing evidence of the fact. Without this any dog tax is practically worthless.

Mr. S. D. Cross, Chester, suggests: "Have a law to kill all mongrel dogs and tax the owner of every good dog \$5, and do not allow any dogs to run at large." Mr. W. C. White, Chester, suggests: "Tax all dogs \$2.50 per head and do not allow to run at large during the nesting season of partridges. At present I have thirteen dogs but keep them confined." Mr. Albert Teague, Laurens: "Tax dogs \$1 with \$5 penalty for failure to return same, the penalty or part of it to go to the game warden for enforcing the law." Mr. A. R. Taylor, Lexington, reports: "I know one negro who had eight or nine dogs which roamed the woods and fields and he paid taxes on none of them." Mr. W. R. Smith, Sr., Newberry, suggests: "a prohibitive tax so as to do away with so many worthless curs and so many worthless dogs." Mr. H. R. Phillips, Fairfield, writes: "There ought to be a law rigidly enforced to exterminate stray dogs, and a license on all others of sufficient amount to prohibit negroes having so many."

In July, 1915, Mr. C. F. Dill, Greenville reports: "A tax on dogs has been passed for this county, and hundreds of dogs and bitches have been killed in the past two months. Tax is \$1 on male and \$5 on female dogs." Again six months later, Mr. Dill reports: "The dog tax in this county has had a wonderful effect. We have fewer dogs at present than ever before." Capt. S. G. Stoney, Charleston, suggests: "There should be a universal dog tax, and the receipts for this special tax should be subject to inspection at any time by the above agencies, (game wardens and trial justices.) All of the license funds and fines, after paying a percentage of the fine to the informant, should be applied to the payment of the game wardens of the State, and the enforcement of the game laws now in existence and those to be established."

A reduction in the dog population would be a great protection not only to birds, but to human life as well. In his annual report for 1915, Dr. F. A. Coward, Bacteriologist of the State Board of Health, suggests the enactment of a

State-wide registration law for dogs because of the danger from hydrophobia. He says that hydrophobia "is practically epidemic with us, and a dangerous epidemic outbreak of large proportions, which may result in many human deaths, may occur at any time."

Gun Tax

In addition to the resident hunting license law, dog tax and dog license, as above suggested, as an additional means of preventing bird destruction, a gun license is suggested by some observers. Mr. J. W. Cantey, Kershaw, writes: "Besides a license to hunt, there should be stipulated that to carry a gun by anyone a license is required. Gun-toters shoot anything eatable at any season of the year. They are not hunters and want no hunters' license, but shoot anything in the tameness of the breeding season. They are not all negroes." Mr. E. L. Wells, Berkeley, suggests: "It would crush the negro shooter and make identification of law breakers much easier. The game laws are now a humbug."

Resident Hunting License.

Dr. T. S. Palmer, in charge of game preservation of the United States government writes: "One of the most difficult problems of game protection in some States is the question how to cope with the negro and his dog. A good resident hunting license law and a good dog law will go a long way toward solving the problem."

The main objects of a resident hunting license law should be: First, to limit shooting on the part of irresponsible people; second, to provide funds for the protection and increase of non-game birds and all kinds of game, and to provide funds for the instruction of the public concerning the usefulness of birds.

The law should be State-wide with no exemptions. Even with such a law, rigidly enforced by well-paid game wardens, the game and non-game birds will continue to suffer unless the public is taught the value of birds to man. A

require every hunter to have a license." Mr. A. L. Youmans, Hampton, suggests: "Have the license fixed so that no one can hunt on any lands except his own without a license, not even on invitation." Mr. A. R. Taylor, Lexington, writes: "I would suggest a higher license for those using automatic and repeating guns." Mr. J. L. Wessinger, writes: "I would suggest that the license be raised to \$8 or \$10."

A careful study of the reports from the seventeen counties having the hunters' license law leads to the conclusion that conditions are already greatly improved thru a reduction in the number of hunters, and that as soon as the law is made State-wide with no exemptions, and its enforcement placed in the hands of a sufficient number of competent well paid wardens our fast vanishing valuable wild bird life will have a much better chance to escape complete extermination.

It is most encouraging to bird protectionists to record that at the last session of the legislature, the benefits of this law were extended to the following counties: Abbeville, Bamberg, Edgefield, Fairfield, Horry, Kershaw, Lee, Anderson, Newberry, Pickens, Richland, Saluda, Sumter, Spartanburg, Union. This leaves only twelve counties in the State without the protection afforded birds by this measure.

The Game Warden

The most important needs suggested by the 27 observers who expressed themselves concerning the game warden force, are: 1, paid Wardens; 2, wardens appointed by reason of their fitness; 3, an active warden in every locality or township.

That there are so many complaints of the non-enforcement of the game laws is not the fault of the State game department, but is rather the result of the lack of funds for paying sufficient salaries to an adequate number of wardens, and to the present system of appointing the wardens. That observers should suggest, "Wardens who

will attend to their business,"—Hankinson, Aiken; "Wardens not afraid to do their duty,"—Seigler, Aiken; "Strict enforcement of law by wardens in every locality,"—Efird, Lexington; "Enforce laws with good men who cannot be bought with a vote,"—Cross, Chester, is no criticism of the personnel of the warden force, but simply and strongly focuses the attention upon the defects mentioned above. Several reports show that the game laws are better enforced today than ever before, due to the fact that a little money has been spent for this purpose.

Mr. A. J. Cox, Williamsburg, suggests: "Pay wardens so you can get the right sort of men who can give all their time to the enforcement of the law." Mr. Alex R. Taylor, Lexington, suggests: "Funds from Statewide hunters' license law to be used exclusively to pay sufficient salaries to wardens." Mr. C. F. Dill, Greenville, writes: "There should be a deputy in every township." Capt. S. G. Stoney, Charleston, thinks: "Our game wardens are not sufficiently compensated and therefore cannot carry out the game laws of the State as they should be."

How enforce laws unless there is a deputy warden on hand whose sole business it is to do so, and who is well paid for it? The enforcement of the game laws besides being a man's job, is a thankless, graceless, enemy-making task and it is useless to expect unpaid persons to do the work. A game warden who enforces the law is usually cordially hated and often he is fortunate to escape with his life. Therefore in order to have active, conscientious wardens good salaries must be paid.

No part of the funds from the sale of licenses and the collection of fines should be diverted to any other purpose until the protection and increase of game and other birds is adequately provided for.

As regards the selection of game wardens, Mr. L. A. Beckman, Charleston, suggests: "Have honest men appointed game wardens, taking into consideration their fitness and leave politics out of consideration so that laws will be enforced." Mr. Edward Howe Forbush, State Ornithologist of Massachusetts, who has given many years

kills every one he can find, and he knows where every covey is in the county, as he makes it his business to know where they are. He told me that he killed and gave to one man last season 400 Quail. I know he killed eighty-four in three days not to say anything of the number he wounded, that afterwards died, and a good number that he could not find. At another time he killed sixty-two on one trip which he brought home, which he says he gave away. The sportsmen up here have estimated that he has killed more Quail this season than all the sportsmen combined have killed. He is a good deputy, I think, and I have recommended him, but he is mad on the subject of how many Quail he can kill in a season. I am informed by Mr. that the warden in county is doing the same thing as the one in this county.

"I will venture to say that if the matter could be looked into, it would be found that there are wardens in most of the counties who are killing Quail the same as those mentioned in my letter. Sportsmen think that the man who is employed to protect the Quail ought not to devote his entire time to killing Quail as some of the wardens do. Some believe that wardens should not be allowed to kill Quail at all on account of the position they hold. Others say they (wardens) ought not to be allowed to shoot oftener than one day in each week.

"What is needed is a law with a heavy penalty against this continual hunting by any one man. The law should prohibit any one man from hunting any oftener than two days in any one week. There ought also, to be a law passed by the legislature making it a misdemeanor and a heavy penalty attached for hunting Quail or rabbits or anything except ducks and other waterfowl with an automatic or pump gun, but especially the automatic.

"I know men who can wipe out whole covies with the automatic guns and the game warden in this county is one of them. He is a dead shot and a hard hunter. If anything can be done to prohibit the use of automatic guns and stop men from hunting oftener than two days in a week, and shorten the hunting season from December 1

to February 15, we might hope to have game plentiful."

Miscellaneous Suggestions

As regards trapping, Mr. E. D. Dargan, Darlington, writes: "There should be a law to prohibit trapping of birds while snow is on the ground." Mr. A. W. Brabham, Bamberg, suggests: "The steel trap in the hands of the trapper is the main cause of the decrease of our wild animals and this fearfully cruel practice should be stopped by law." Mr. B. D. Efird, Lexington, writes: "Make shorter season for game and fur bearing animals, also prohibit the setting of steel traps."

That there is need in the opinion of some observers of limiting the number of days in a week on which a man may hunt, is shown by a reference to Mr. Dill's letter on another page, and to the report of Mr. T. W. Brunson, Jr. Hampton, who writes: "We have a few men in our county who hunt and fish all the time. They stay within the bounds of the law, I believe, but still they do a lot of harm to our birds as they go every day and get the limit. If we had some way to regulate this, I think it would do good. I do not think that any amount of money that our good men in the State will put out to help protect our birds will be lost. We need every bird to help the farmer. Many farmers have realized this and have all their lands posted."

The efficacy of a law limiting the number of birds which may be taken in a day depends largely upon the sense of honor of the individual hunter. Conditions prove that such a law is not observed without an enlightened sentiment behind it, and it is supposed by some observers to be almost impossible to enforce it. Dr. Charles W. Kollock, Charleston, suggests: "Limit the number of birds to each gun, this to include ducks." In view of the fact that the game birds are rapidly disappearing the bag limit on all species in this State is too high.

In order to have birds it is neither desirable nor necessary to restore forests to their primitive conditions even if

possible. In the general settling up of the country special attention should and must be paid to the protection and encouragement of birds, by leaving trees and shrubs which will provide food, shelter and nesting sites. There are spots on every lot and farm where the wild food plants of birds can be made to grow. Fencerows and hedges should be allowed to remain uncleared.

There are sections of swamp land and some of the coast islands, owned by the State, which will never be suitable for agricultural purposes. By legislative enactment certain areas should be set aside as reserves upon which birds might live and breed in safety.

One observer suggests doing away with modern firearms. Some of the most destructive guns should certainly be prohibited by law, and until that time comes, no man who regards the protection of game as important should ever use one. In the old days skill in bagging the game was more in the man than in the gun. Some of the weapons in use today, in the certainty of their slaughterous effects, leave no room for the element of sport.

As regards the suggestion that the game and fish laws be made intelligible, there is no doubt that complications arising from the lack of stability and uniformity of these laws, and the differences in the dates of the "open season," result in a lack of understanding and respect, and encourage violations. Many persons report that Quail are killed in the Dove season before the Quail season opens.

Local legislation is usually at the instigation of individuals who are working for their own private, selfish interests at the expense of the game and the public. The keynote of modern game legislation is uniformity. There should be no "cloudy laws". State laws on migratory birds should be made by legislative enactment to harmonize with federal regulations. The seasons also should be made to agree.

The blood test to be applied to any bill introduced into the State legislature affecting bird life, is this: Is it for the protection of the birds? If a plain answer cannot be given in the affirmative, the public should demand the

speedy and overwhelming defeat of any such legislation.

A statute prohibiting Sunday hunting should be incorporated in the State game laws so as to make it the especial duty of the game wardens to look to its enforcement. Capt. Robert Magwood, Charleston, suggests: "Stop all Sunday hunting, as Sunday hunters seem to hunt almost every Sunday and therefore hunt more than other hunters. The latter do not get out as a rule more than once or twice a month." The same respondent, suggests also: "Make non-resident license very high. When they are here they hunt more than residents."

Any system of game bird conservation, either public or private, provides conditions under which the non-game birds also thrive. Mr. J. A. Harvey, Berkeley, writes: "From my observation the game preserves do more for the protection of game generally than any other agency in operation." All friends of the protection of non-game birds should also be game bird protectionists. The preservation of the former is inextricably bound up with that of the latter.

One way in which to conserve game birds directly and increase the numbers of non-game birds is by the establishment of bird reservations. Those under the National and State governments and the National Association of Audubon Societies have been most successful in fulfilling the purpose for which they were established.

Summary and Conclusions

Conclusive evidence seems to be given that:

1 The birds of the State are rapidly decreasing, following the general decrease all over the country.

2 Man in his various activities, including the importation of natural enemies, including the elements, are only secondary causes of decrease.

4 With the exception of the native natural enemies, all other destructive enemies are rapidly on the decrease.

5 The destruction is greatest among those species which are most hunted for food and sport.

6 Birds are openly molested during the nesting season by nest robbers.

7 In many localities important species are becoming very rare and others are nearing extinction.

8 The universal gun in the hands of men and boys of both races and all classes cause untold destruction.

9 The vast injury done by all kinds of dogs roaming at large during the birds' nesting season, presents a problem which demands immediate and forceful attention.

10 A condition of woful ignorance as to the usefulness of birds, game laws, etc., exists among the masses of the people, and this must be corrected.

Measures Imperatively Demanded by Conditions

1 Every State lawmaker should recognize the fact that the protection of wild life is one of the imperative duties of every good citizen.

2 A new code of wild life laws should at once be framed to afford the utmost protection to wild life, and encouragement to all those who would preserve and increase it.

3 As the non-enforcement of the law is due largely to a lack of an adequate number of well paid wardens, a State-wide resident hunting license law should at once be enacted partly to furnish funds for real wild life protection.

4 Funds accruing from this source should not be diverted to other sources until sufficient protection has been given our valuable wild life.

5 To have efficient wardens who can devote themselves unselfishly to the enforcement of the law, civil service rules should govern in their selection and appointment, and the protection of the wild life of the State should be removed entirely from the domain of politics.

6 As dogs are one of the worst enemies of ground nesting birds, there should be a State-wide, high dog tax law rigidly enforced and all dogs should be confined during summer months.

7 Stray cats should be killed, valuable cats should be licensed and all others destroyed.

8 There should be a close season for a term of years on those species of game birds which are rapidly disappearing and a short uniform open season on all others.

9 A campaign of education conducted by the State is now imperative, and bird study should be compulsory in the schools.

**List of Names of Those Who Filled Out Blank Forms for
Information Which Forms the Basis of this Bulletin**

Abbeville—R. E. Hill, Orville Calhoun, W. C. Shaw.

Aiken—W. M. DuBose, Maj. Harry Hammond, Asheton Head, Cecil Seigler, John G. Chafee.

Anderson—H. C. Summers, B. M. Aull, M. L. Bonham, A. N. Richardson, Col. J. C. Stribling.

Bamberg—George A. Jennings, W. B. Chitty, W. H. Ritter, W. A. Klauber, G. Frank Bamberg, A. W. Brabham.

Barnwell—Idis Brabham, W. T. Hankinson, Jr., W. H. Duncan.

Beaufort—Dr. W. R. Eve, Patrick Wall, W. D. Brown, Neils Christensen, H. M. Stuart.

Berkeley—J. E. Singletary, J. A. Harvey, John S. Sanders, E. L. Wells.

Calhoun—J. E. Wannamaker, A. K. Smoke, D. H. Trezevant, L. B. Bates, J. S. Wannamaker.

Charleston—Judge H. A. M. Smith, T. J. Simons, L. A. Beckman, F. M. Weston, Jr., Capt. Robert Magwood, Dr. W. C. Kollock, Capt. S. G. Stoney.

Cherokee—C. W. Whisonant, J. W. Humphries, F. McCluney.

Chester—S. D. Cross, John C. Dye, W. C. White.

Chesterfield—G. A. Malloy, G. W. Duvall.

Clarendon—Charlton Durant, H. C. Cousar, E. Von S. Dingie.

Colleton—Cleveland Sanders, T. D. Ravenel, C. W. Drawdy.

Darlington—Mrs. M. T. Lide, James McIntosh, J. L. Coker, Jr., E. M. Andrews.

Dillon—Jas. A. Mallory, R. S. Rogers, J. H. Manning, Dr. Wade Stackhouse, A. J. Bethea.

Dorchester—P. C. Johnson, L. A. Walker.

Edgefield—P. N. Lott, J. D. Holstein, J. R. Strother, Sr., D. B. Hollingsworth.

Fairfield—Henry R. Phillips H. E. Ketchin.

Florence—I. Sulzbacher, M. S. Haynesworth, F. L. Willcox, B. D. Dargan.

Georgetown—F. W. Lachicotte, B. P. Fraser, W. D. Morgan.

Greenville—C. F. Dill, W. R. Hale, Sr.

Greenwood—A. A. Coleman, Geo. E. Holland, Jas. F. MacEnroe, W. C. Haddon, C. T. Carson.

Hampton—W. C. Mauldin, Albert L. Youmans, T. W. Brunson, Jr.

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Lancaster—J. M. Yoder, T. R. Thompson.

Laurens—Albert Teague, J. D. W. Watts.

Lee—R. M. Cooper, Jr., K. E. Wells, E. Alexander, L. L. Baker.

Lexington—D. P. Efird, Dr. E. C. Ridgell, E. G. Dreher, J. L. Wessinger, A. R. Taylor.

Marlboro—R. J. Adams.

Marion—J. M. Johnson, Jr., Dr. A. McIntyre.

Newberry—Thomas M. Mills, Z. W. Bedenbaugh, W. R. Smith, Sr.

Oconee—Dr. A. F. Conradi, Henry Verner, J. H. Harrison, W. H. Mills.

Orangeburg—M. O. Dantzler, F. W. Frederick.

Pickens—Judge T. J. Mauldin, T. A. Bowen.

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Saluda—G. S. Patrick, Dr. F. G. Asbell, Rev. W. B. White.

Spartanburg—Paul V. Moore, West Harris, Furman Ezell.

Sumter—W. L. Sanders, H. W. Beall, F. M. Dwight, R. B. Belser.

Union—Macbeth Young, J. M. Whitehead, J. L. Walker.

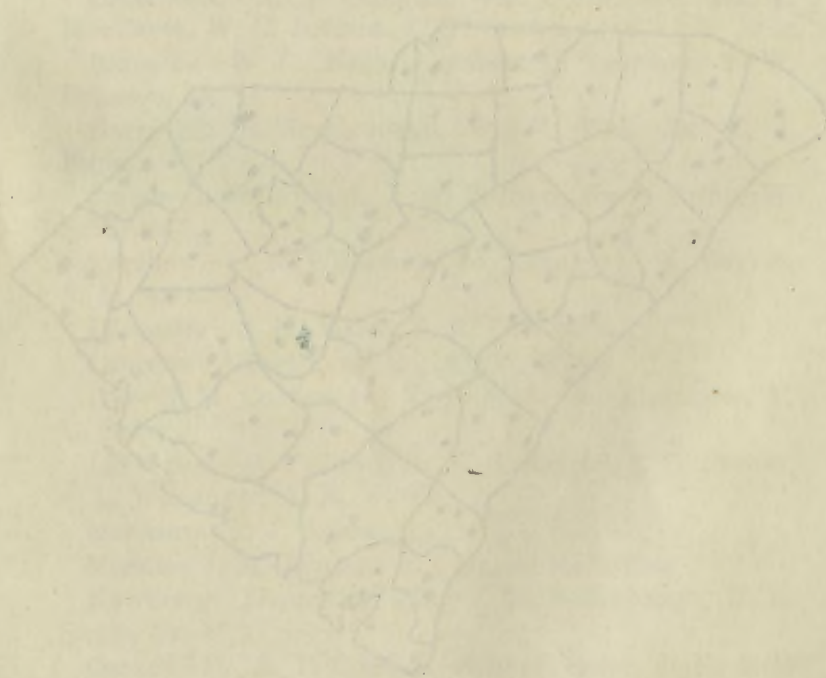
Williamsburg—E. C. Eppes, A. J. Cox, J. E. Davis, C. W. Boyken.

York—A. A. McKeown, John H. Steele, J. F. Reed.

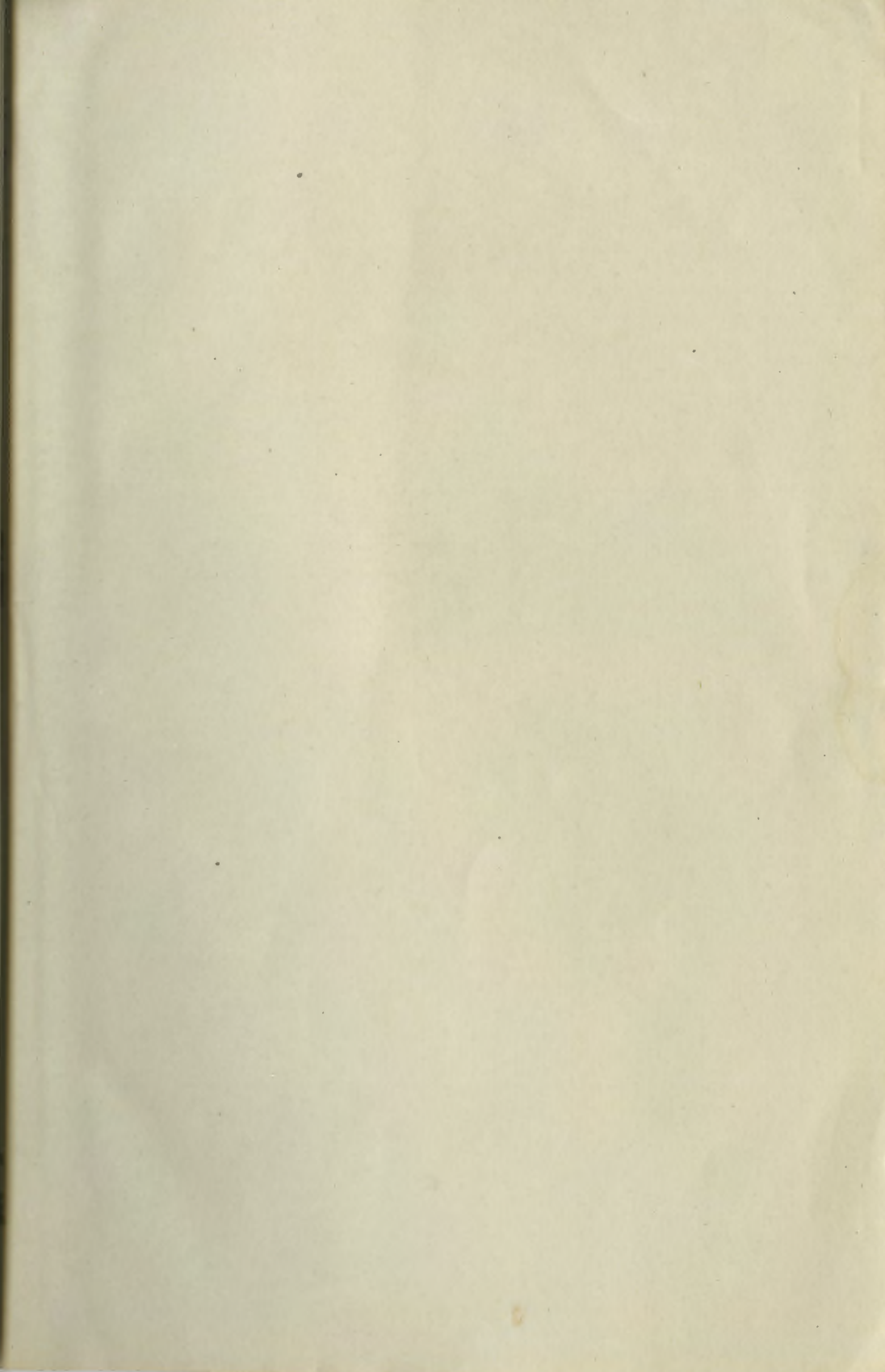


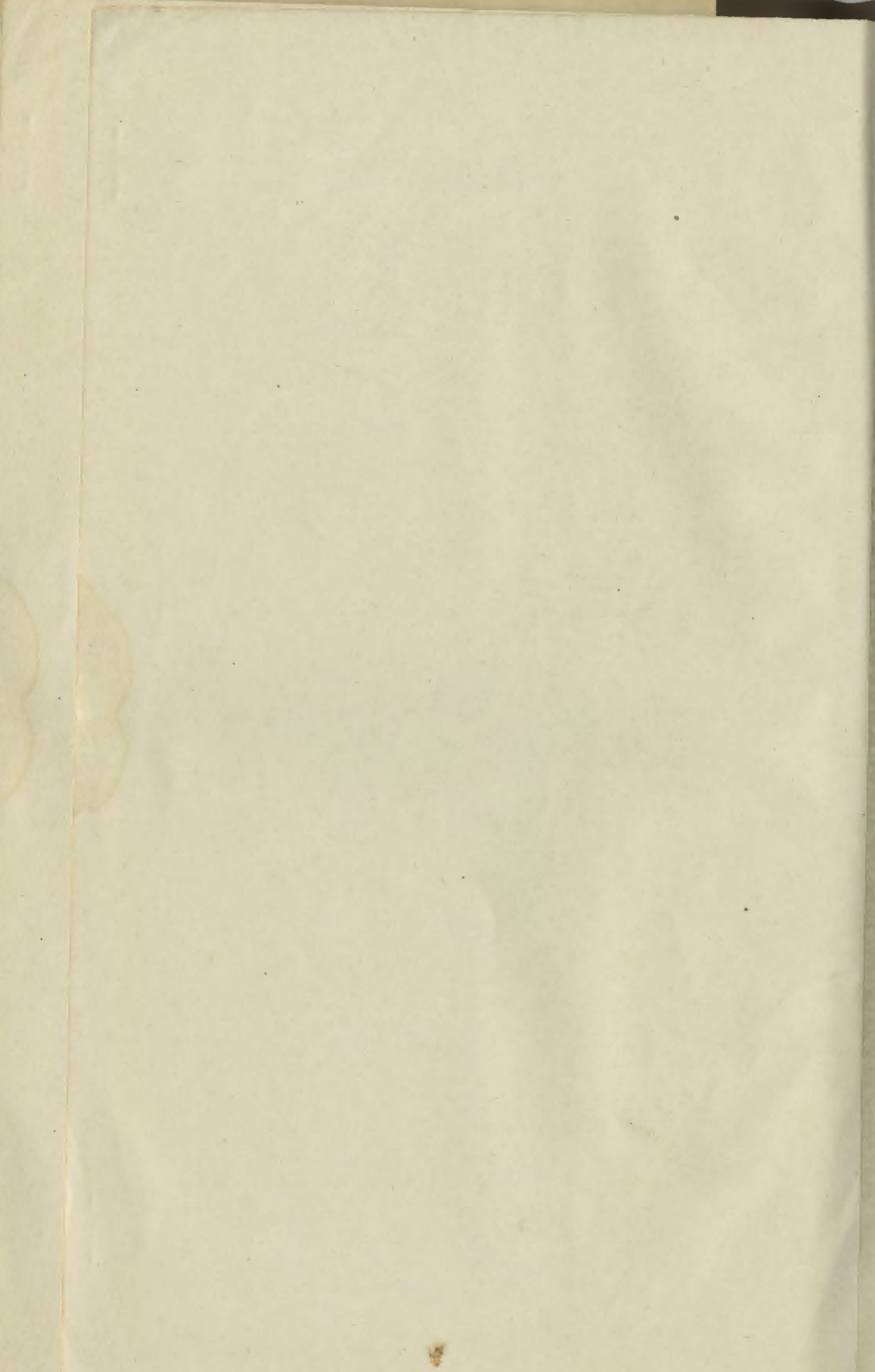
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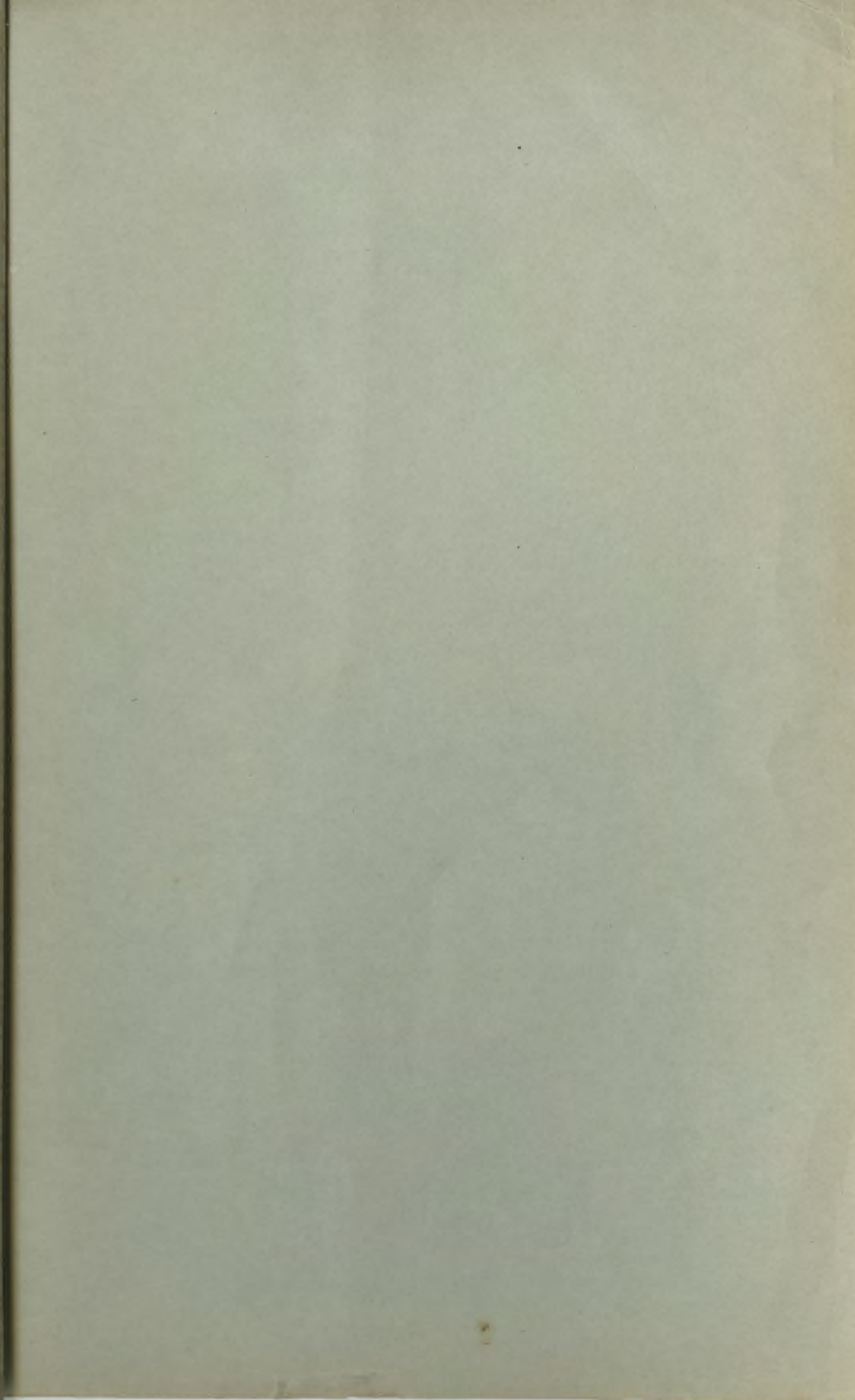
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